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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,425	02/06/2004	John V. Frangioni	14952.0319	2053
27890	7590	11/30/2005	EXAMINER	
STEPTOE & JOHNSON LLP 1330 CONNECTICUT AVENUE, N.W. WASHINGTON, DC 20036			LE, HOA T	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,425

Applicant(s)

FRANGIONI ET AL.

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
4a) Of the above claim(s) 1-11 and 22-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/04; 08&10/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-11 and 23-25, drawn to a composition, classified in class 428, subclass 402.
  - II. Claims 12-21, drawn to a imaging method, classified in class 424, subclass 1.29.
  - III. Claim 22, drawn to an imaging system, classified in class 324, subclass 332.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product such as paint composition.
3. Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product such as paint composition.

4. Inventions II and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another materially different apparatus such as paint brush or optical laser.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Applicant's Representative on June 15, 2005, a provisional election was made with traverse to prosecute the invention of group II, claims 12-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-11 and 22-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

8. Claims 12-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 appears incomplete and thus indefinite. It's unclear how the emission of the particle can be generated. What is the source of the excitation?

Other claims are deemed indefinite in view of their dependency upon claim 12.

***Double Patenting***

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 12-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-23 of copending Application No. 10/772,424. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims and the claims of the conflicting application are both directed to the same subject matter: method of using semiconductor nanocrystals in imaging. The only difference is that the claims of the conflicting application are to imaging tissue as opposed to imaging lymphatic system of the instant claims. However, lymphatic system is made of vessels that begin in tissues; therefore, a method of imaging a tissue is equivalent to imaging a lymphatic system and vice versa. Therefore, it would have been obvious that a method of imaging a tissue can be equivalently applied to lymphatic system.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Wolf patent (US 5,496,536) taken in view of the Bawendi patent (US 6,207,209), the Weiss patent (US 6,207,392) or the West patent (US 6,530,944).

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Claim 12: The Wolf patent teaches a method of imaging a lymphatic structure comprising applying a particulate contrast agent subcutaneously wherein the agent is a nanoparticle. See Mattrey, col. 5, lines 49-60 and col. 7, lines 14-27. The Bawendi, Weiss, and West patents each teach a semiconductor nanocrystal that exhibit superior emission which makes them useful in biomedical imaging. See Bawendi, col. 3, lines 1-6 and col. 2, lines 31-35; Weiss, col. 2, lines 20-62; and West, col. 5, lines 12-23 and col. 24, lines 7-50. Therefore, it would have been obvious for one having ordinary skill in the art to apply the semiconductor nanocrystals taught by Bawendi, Weiss, or West in the imaging method taught by Wolf because the semiconductor nanocrystals taught by these patents are capable of generating emission with high quantum efficiencies and excellent optical properties that make them highly suitable for biomedical imaging (See Bawendi, col. 2, lines 31-35; Weiss, col. 2, lines 6-27; West, col. 4, lines 46-64 and col. 24, lines 7-50).

Claim 13: See Wolf, col. 7, lines 19-27.

Claims 14-15, 18 and 21: See Wolf, col. 5, lines 49-56; col. 6, lines 26-43; Weiss, col. 2, lines 47-63; and West, col. 8, lines 34-59; and col. 24, lines 8-25.

Claims 16, 17, 19 and 20: See Bawendi, col. 2, lines 38-49 and claim 7; Weiss, col. 2, lines 20-30; col. 5, lines 15-34; West, col. 4, lines 59-63; col. 6, lines 65-67.

### ***Information Disclosure Statement***

13. Some of the references listed in PTO-1449 have not been considered because the contents of the references do not appear to be relevant to the claimed invention. If

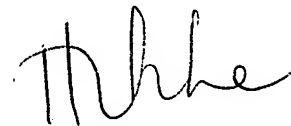
Applicants would like any of these references to be considered, citation of the reference(s) must be resubmitted along with a concise explanation of the relevance of the reference(s).

14. References are cited as art of interest.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



H. T. Le  
Primary Examiner  
Art Unit 1773

Nov. 26, 2005